

What is claimed is:

1. An apparatus for controlling the temperature of a core of a transformer, comprising:  
  
a core;  
  
a shield, wherein the shield surrounds the core;  
  
a cast, wherein the cast is between the core and the shield; and  
  
tubing, wherein the tubing is positioned on the shield.
2. The apparatus according to claim 1, wherein the shield is made of copper.
3. The apparatus according to claim 1, wherein the cast is made of a thermal epoxy.
4. The apparatus according to claim 1, wherein the tubing is made of copper.
5. The apparatus according to claim 1, wherein the tubing is formed in a helix on the core.
6. The apparatus according to claim 1, wherein the tubing runs in a wave pattern along a vertical axis of the core.
7. The apparatus according to claim 1, wherein the cast is formed by using at least one mold to form the cast.

8. The apparatus according to claim 1, wherein the tubing accommodates a fluid for cooling the shield.

9. A method for controlling the temperature of a core of a transformer, comprising:

placing a shield around the core of the transformer;

forming a cast between the core and the shield; and

placing tubing on the shield of the transformer.

10. The method according to claim 8, further comprising:

directing a flow of fluid through the tubing for controlling the temperature of the core.

11. The method according to claim 8, wherein the shield is made from at least one of a copper and a copper alloy.

12. The method according to claim 8, wherein the tubing is made from at least one of copper and a copper alloy.

13. The method according to claim 8, wherein the cast is made from an epoxy.

14. The method according to claim 8, wherein the tubing is formed in a helix on the core.

15. The method according to claim 8, wherein the tubing is placed along a vertical axis of the core in a wave pattern.

16. The method according to claim 8, further comprising:  
placing an adhesive on the shield to secure the tubing to the shield.

17. An apparatus for controlling the temperature of a core transformer comprising:

a means for receiving heat from the core;

a means for directing the heat from the core to the receiving means; and

a means for cooling the receiving means, wherein the cooling means is placed on the receiving means.

18. The apparatus according to claim 16, wherein the receiving means is a shield.

19. The apparatus according to claim 16, wherein the directing means is a thermal epoxy cast.

20. The apparatus according to claim 16, wherein the cooling means is tubing for accommodating a flow of fluid for cooling the receiving means.

21. The apparatus according to claim 16, wherein the cooling means is vertically placed on the receiving means.